



REMARKS/ARGUMENTS

In the office action of Nov. 2, 2006, claims 5, 6, and 8 - 17 were rejected as unpatentable under 35 U.S.C. Section 112, second paragraph. Claims 1 - 3, 5, 6, 8 and 9 were rejected under 35 U.S.C. Section 102(b) as anticipated by Wick, U.S. Patent 3,647,024. Claims 1, 3, and 4 were rejected under 35 U.S.C. Section 102(b) as anticipated by Orr, U.S. Patent 2,654,441. Claims 1, 7, and 10 - 17 were rejected under 35 U.S.C. Section 102(b) as anticipated by Taniyama, U.S. Patent 4,144,950. Reconsideration of the claims in view of the amendments and the following remarks is respectfully requested.

Telephone Interview

The Applicants thank the Examiner for the telephone interview of Feb. 7, 2006 at which the prior art references and proposed claim amendments, and particularly the distinctions between the claims as amended and the cited references were discussed.

112 Rejections

The antecedent basis problems cited by the Examiner have been addressed in the amended claims. In view of the amendments, the Applicants respectfully request that the rejection under 35 U.S.C. Section 112 be withdrawn.

102 Rejections

The Wick Reference. The Wick reference discloses an upper driveshaft bearing lubrication method. In this method an oil passageway 58 is provided in the drive shaft housing. The oil passageway leads to an upper bearing 20, and lubricating oil spills over the bearing and returns to the gear case by way of the interior cavity in the draft shaft housing. As can be seen in Figure 1, and as described in the specification at column 2, lines 43 - 49, the oil passageway is carved into the drive shaft housing and is not open radially to the shaft.

The Orr Reference. Orr discloses a lubricating means for transmissions. In the office action, a channel 23 is referenced. The cited channel 23 is described as a helical lubricant groove. The channel 23 is formed in a liner portion of a bearing, and draws oil from a pool 25 bounded by a rib 24.

The Taniyama Reference. Taniyama discloses a differential unit for a motor vehicle, including a drive pinion shaft 30 and axially spaced roller bearings 41 and 42 mounted within the cylindrical support structure and positioned by means of a cylindrical spacer 36. An oil supply passage 22 and oil return passage 23 are provided in a support structure 21. The passages open to chambers R1, R2, and R3 that are all on an opposing side of the cylindrical spacer from the drive pinion shaft 30.

Claims 1 and 10 as amended, recite a gearbox including a sealed housing. A shaft is provided in the housing, extending through a shoulder of the housing. A bearing journals the shaft, and a gear drive is also coupled to the shaft. A channel, open radially to the shaft and extending along a length of the shaft, is provided in the shoulder, extending axially from the gear drive to the bearing. A lower portion of the channel is positioned above and adjacent the shoulder to receive lubricating fluid rotated by the gear. As the gear rotates, rotating lubricants pass into the channel and are propelled to the bearing for lubrication of the bearing. Because the channel is simply formed in the housing, open to the shaft, the claimed invention provides a channel for lubricating the bearing that is easy to construct, does not require significant additional passages to be provided in the housing, and does not significantly increase the size of the housing.

None of the cited references disclose a gearbox that includes a channel that is open radially to the shaft, and that lubricates a bearing as recited in the claims. Wick discloses a

channel that is formed in the body of the housing, clearly offset from the shaft. Taniyama, similarly, includes a channel that is formed in the body, and that is offset from the shaft by a cylindrical spacer. The channel that lubricates the bearing in the system disclosed by Orr is a helical groove formed in a liner. None of these references, therefore, disclose a system as recited in the claims, and the Applicants respectfully request that the rejections under 35 U.S.C. Section 102 based on these references be withdrawn.

The Commissioner is authorized to charge any fees under 37 CFR § 1.17 that may be due on this application to Deposit Account 17-0055. The Commissioner is also authorized to treat this amendment and any future reply in this matter requiring a petition for an extension of time as incorporating a petition for extension of time for the appropriate length of time as provided by 37 CFR § 136(a)(3).

Respectfully submitted,

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